

# November 2015 Newsletter

Big Island Amateur Radio Club

## Measure twice; cut once!

Big turnout for hands-on roll-up J-pole antenna workshop

The Keaau Community Center meeting room was bustling, overflowing with hams of all ages, at the October BIARC meeting, which featured a roll-up J-pole-building workshop coordinated by John Bush, KH6DLK, and Les Hittner, K0BAD.

Many were there to build their own antennas, while others had come to assist. Some did both!

To get area hams up to speed, powerwise, Les and John had put together kits holding the raw materials

*Continued  
on next page*



*Photos by Sher Glass, WH6ESG*

John Bush, KH6DLK, center, and Les Hittner, K0BAD, not pictured, held everyone's interest at their successful antenna-building workshop at the Oct. 10 monthly BIARC meeting at the Keaau Community Center.



Robert Oliver, NH6AH, at left, mans a soldering table for antenna-makers as they near conclusion of the hands-on exercise.



*From previous page*

and had invited anyone interested to attend their "How to Build a Simple Emergency Two-meter Amateur Radio Antenna" hands-on workshop.

"The Twin Lead J-Pole will be our BIARC club project," said Les, explaining the day's main attraction.

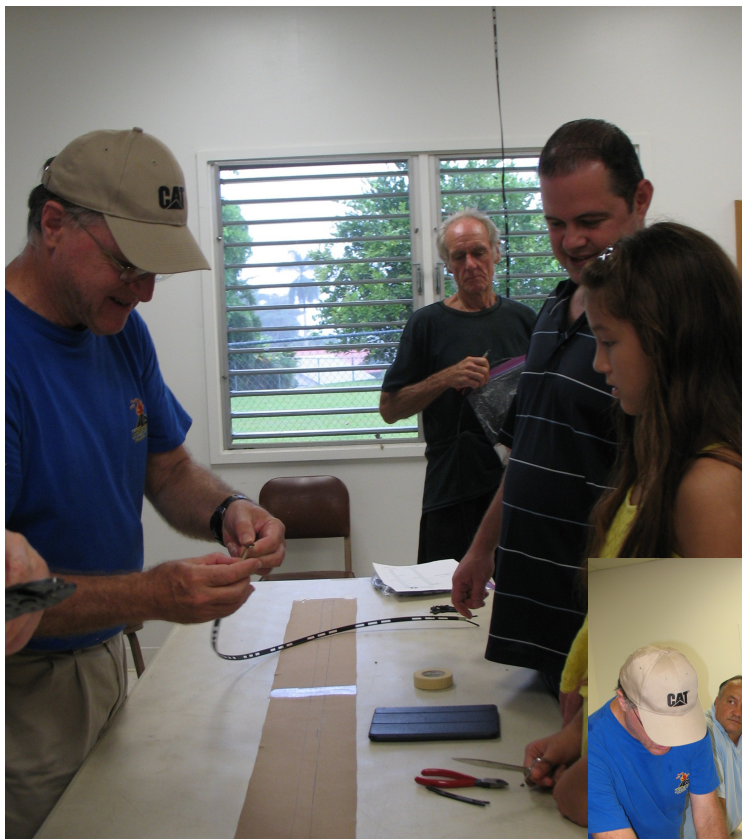
"The J-Pole is a popular two-meter antenna that can easily be constructed. And it easily can be mounted inside or outside.

"Beginners can build this antenna in minutes," he promised. "And it rolls up and fits in the glove box!"

Cost was \$15 for current BIARC members and the general public. Hams who joined BIARC on that day got a special bargain: Their \$20 annual membership dues will cover the rest of 2015 and all of 2016, and, to boot, each new member received a free J-Pole kit for the workshop.

Barbara Darling, NH7FY, manned the registration table. "We ended up with \$685, which included 32 paid members for 2016 -- 21 brand new AND 11 renewals," she reported.

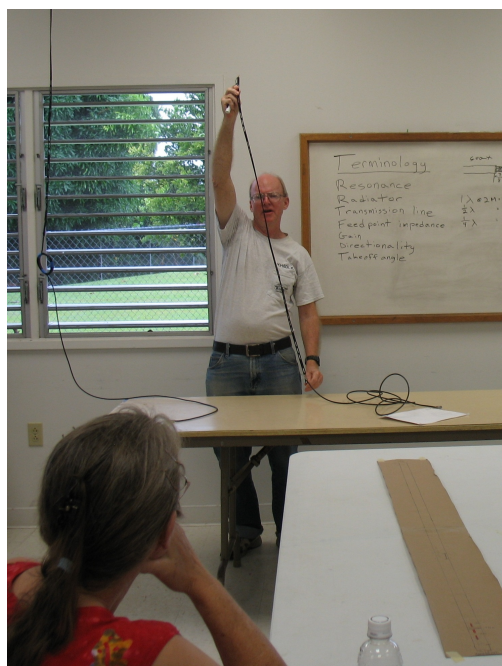
Here are a few of the glowing reports from the membership: "That was a great get-together for antenna fun;" "I had so much fun; I got home after 5:30 p.m. and could not believe it was so late;" "After trying different locations in and out of my house, I've found some spots where the antenna works just great and people can hear me now."



**Photos by Sher Glass,  
WH6ESG**

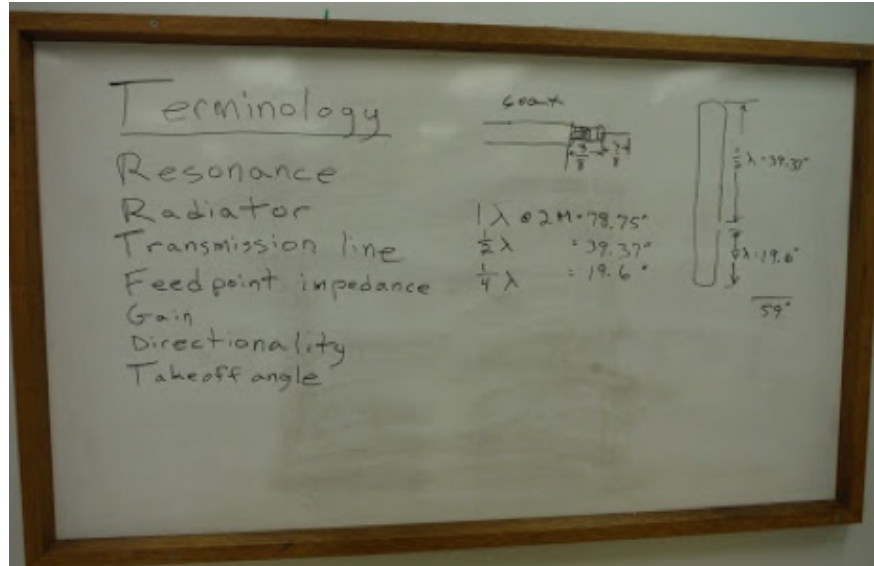
Angelina Schwiter, WH6EVK, above, gets assistance from Tom English, WH6EBS, as she makes her first homemade antenna.

John Bush, KH6DLK, at left, demonstrates the scale and ratios used in creating the J-pole.



**Barbara Darling,  
NH7FY,  
registers folks for  
club membership  
and the J-pole  
class.**





# Concentration!

Photos by John Bush, KH6DLK



# On-air event to mark NPS centennial

In 2016, the National Park Service (NPS) will celebrate its 100th anniversary, and radio amateurs will be able to help mark the occasion with the ARRL National Parks on the Air (NPOTA) event. The event kicks off at 0000 UTC on January 1, 2016.

"As ARRL just celebrated our own Centennial, and Amateur Radio is often enjoyed in the great outdoors, it seemed fitting to devise a program to help NPS celebrate their own 100th birthday," said ARRL Media and Public Relations Manager Sean Kutzko, KX9X.

NPOTA will run throughout 2016, with activity promoted and encouraged from each of the more than 430 official NPS administrative units and affiliated areas across the US. This includes all 59 National Parks as well as National Battlefields, Historic Sites, Memorials, Preserves, Reserves, Rivers, Seashores, National Scenic Trails, and other units.

The program will have two participation tracks -- Chasers and Activators. Chasers will simply attempt to make contact with operators in as many of the NPS units as possible. Activators will attempt to activate as many of the units as possible. NPOTA participants may serve in both roles. Chaser and Activator totals will be tracked via an online Leader Board based on LoTW data, just as was done during the Centennial QSO Party. Access the NPOTA Leader Board directly at <http://npota.arrl.org>.

Modeled after the Mixed DXCC award, only one contact with any given NPS unit will be required, and no tally will be kept of NPS units based on bands or modes. NPOTA will be administered entirely through Logbook of The World (LoTW). No paper logs or QSLs will be accepted for NPOTA credit. Each NPS unit will be added to LoTW as a "location." Chaser Award and Activator Award certificates will be available to any radio amateur who has at least one confirmed contact with an NPS unit or who activates at least one unit, respectively.



A station's total number of confirmed or activated units will be printed on the certificate. The National Parks Honor Roll certificate will be available to any station confirming contact with at least 75 percent of the 59 National Parks activated in 2016.

## ***Update on Big Isle repeaters:***

On the Island of Hawaii, the VOAD repeater on Mauna Kea (146.72-) has had its antenna replaced with a super strong one rated over 165 MPH.

Pepeekeo Repeater (146.88-) has been replaced with a new radio. The new Pepeekeo machine now requires a 100Hz tone to access. The cross-island UHF link of the BIWARN system has been removed and will soon be replaced with a microwave unit. In the process of removing the link radio, the backup battery was cracked and acid leaked on the floor and had to be cleaned up with baking soda.

The Big Island Amateur Radio Club plans to next replace the Kulani (146.76-) machine. Hopefully, this will happen by the end of the year.

The last to be replaced will be the Naalehu unit (146.92-), however that will also involve building a new house for it.

**Bob Schneider, AH6J,**  
ARRL Pacific Section Manager



# Big Island Hamfest and Swap Meet - Oct 24

Jim Tiemstra, Vice Director of the ARRL Pacific Division, will be the guest speaker at 12 noon on Saturday, Oct. 24, in Waimea at the Original Big Island of Hawaii International Hamfest and Swap Meet in Waimea.

Jim will be showing a video presentation of ARRL headquarters as well as sharing information on the Pacific Division, with a mini forum to follow.

"This is a coordinated event of the Kohala Hamakua Radio Club and the Kona Amateur Radio Society," said spokesman Stuart Johnston. "Be sure to tell all your radio friends. See you there."

The session will be held at the Waimea Community Center, next to the ball field off Mamalahoa Highway. It's the same venue as last year. There will be a \$10 donation per table per seller. A \$5 donation per attendee will be collected at the time of registration.

Here's the schedule:

8 am - breakfast at Hawaiian Style Cafe

9 am - Vendor setup

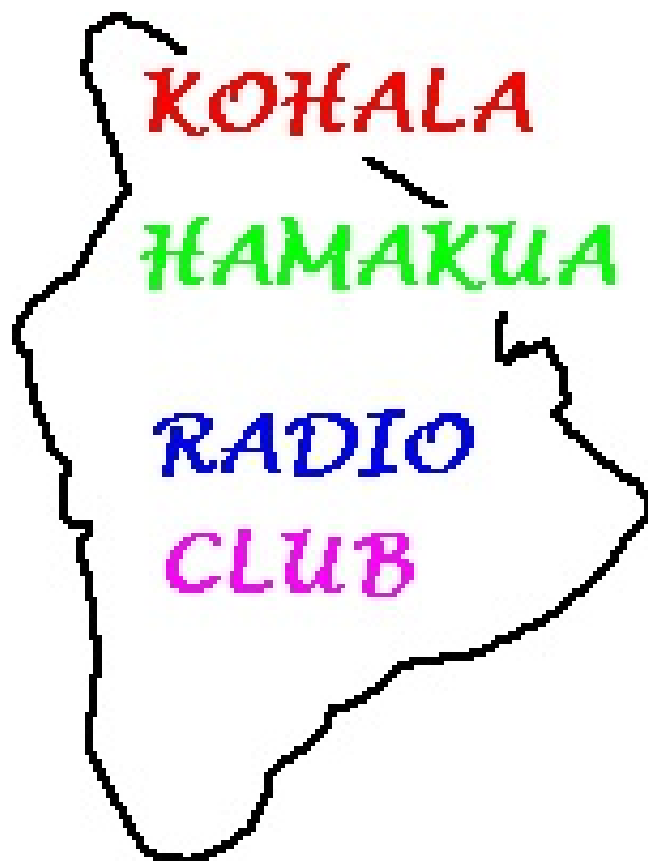
10 am - Doors open to public (be sure to get your raffle tickets for the "Big ticket items")

Noon - Set up for VE testing. Guest speakers, forum, presentations in adjoining room.

1 pm - VE testing (a good time to upgrade your license)

2 pm - Event comes to a close; pack up, clean up.

There will be QSL card checking and surprise giveaways throughout the day.



Please note: This is a non-commercial event that promotes the trading of equipment and information between hams and the general public and to promote the open exchange of exploring ham radio as a hobby.

Talk-in Frequencies:

146.940 (110.9 tone) Maui Repeater

443.650 (100hz tone) Kona

Repeater.

For more information, contact:

Stuart Johnston, KH7DX, 808-896-1290,

kh7dx@arrl.net, P.O. Box 5095  
Kailua-Kona, HI 96745, or

Joe Crable, KH7AX, 808-987-1440,  
kh7ax.mail@gmail.com

<http://www.hamradioandmore.com/khrc.htm>

Thanks for supporting Ham Radio in the Hawaiian Islands

Stuart Johnston





# ARRL asks FCC to clarify: Hams may modify non-amateur gear

The ARRL has asked the FCC to make clear that Amateur Radio licensees may modify non-amateur equipment for use on Amateur Radio frequencies. Some hams have expressed concerns that recently proposed rules would inhibit post-sale modification of Wi-Fi equipment, now sometimes altered for use on Amateur Radio frequencies. The ARRL made its point in comments filed on October 8 on a Notice of Proposed Rule Making (NPRM) in ET Docket 15-170 and RM-11673. The proceeding mostly addresses proposed amendments to FCC rules regarding authorization of RF equipment.

"The Commission should clarify...that the ability of licensed radio amateurs to modify and adapt non-amateur equipment for use in the Amateur Service is beneficial, is permitted, and is not restricted by any rule of general applicability adopted in this proceeding," the League said in its comments. The ARRL said proposed rules requiring manufacturers to include security features to prevent network devices from being modified were "problematic," to the extent that they would preclude hams from adapting network equipment for ham radio applications.

"The Amateur Radio Service has a very long tradition of modification and adaptation of commercial communications equipment," the ARRL pointed out in its comments, asserting that amateur licensees should be permitted to modify any previously authorized equipment for use under Amateur Service rules. The proceeding attracted many comments regarding this aspect of the proceeding, although the proposed rules differ only slightly from the current rules.

The ARRL also urged the FCC not to apply any limitations proposed for software defined radios to SDRs intended for use exclusively in the Amateur Radio Service, "as has been the policy for the past 10 years."

The League has also called on the Commission not to combine the Declaration of Conformity (DoC) and Verification equipment authorization procedures into a single, self-approval program.

The League said the proposal could lead to abuse by unscrupulous importers and manufacturers of unintentional emitters. Under the proposed rules, the FCC would do away with its DoC authorization program by combining it with equipment Verification to form a so-called "Suppliers Declaration of Conformity" category of equipment authorization. Testing in an accredited laboratory would not be required, nor would database registration or third-party review.

The ARRL expressed concerns that the new regime would encourage and facilitate the introduction into the US

of "non-compliant unintentional emitters" and offer no oversight.

In its comments, the League said hams and AM broadcasters have been victims of interference from such unintentional emitters as RF lighting ballasts "that routinely exceed the Commission's conducted emission limits." The ARRL said the solution is "not to loosen but to tighten the procedural controls over the testing and affirmative confirmations of compliance" to ensure greater compliance in conducted limits and other technical parameters that determine how much such devices contribute to ambient noise levels.

The League said some RF devices, such as RF "grow lights," now subject to the more informal Verification process, should be subject to Certification, owing to their substantial interference potential.

The ARRL also said there is "an urgent need" for improved labeling requirements for certain Part 15 and Part 18 devices. "Necessitating change, notably, is the fact that there are many industrial Part 18 devices sold that are neither intended nor designed for use in residential environments, but because there is no external labeling...the end user consumer is left without guidance," the ARRL said, noting that, in most cases, equipment retailers are not providing any either.

In July, the ARRL complained to the FCC about the marketing practices of various "big box" retailers, where non-consumer-rated lighting ballasts have been mixed in with consumer ballasts and other consumer products on display with no explanatory signage. Ballasts intended for industrial applications have higher permitted conducted emission limits in the Amateur Radio HF spectrum. The League called on the FCC to include a definition in Part 18 for the term "consumer RF lighting device," to provide a way to differentiate consumer devices from those intended for industrial or commercial environments.

The League also said the FCC should consider reducing its Part 15 limits for lighting devices to correspond with the Part 18 lighting device limits between 3 and 30 MHz to reduce the RFI potential of LED bulbs now being widely marketed, "before they become an aggregate problem." LED lamps operate under Part 15 rules.

The ARRL said the FCC should adopt the League's new equipment-labeling proposals with respect to certain Part 15 and Part 18 equipment "in order to stop the flood of such devices intended for commercial or industrial areas only into residential areas."



2015	SSB	CW	PSK31	RTTY	JT	Totals
160	0	0	0	0	0	0
80	22	2	0	0	0	24
40	599	567	2	3	2	1173
20	2191	2335	131	69	1	4727
15	253	299	0	53	0	605
10	118	10	0	0	0	128
<b>Totals</b>	<b>3183</b>	<b>3213</b>	<b>133</b>	<b>125</b>	<b>3</b>	<b>6657</b>

2014	SSB	CW	PSK31	RTTY	JT	Totals
160	0	0	0	0	0	0
80	14	5	0	0	0	19
40	327	445	8	5	0	785
20	2926	1338	339	117	0	4720
15	1919	1344	9	85	0	3357
10	39	25	0	22	9	95
<b>Totals</b>	<b>5225</b>	<b>3157</b>	<b>356</b>	<b>229</b>	<b>9</b>	<b>8976</b>

# Hawaii QSO Party results are in

Joe Speroni announces that the 2015 Hawaii QSO Party results are in: "We invite you to view them on the contest website at [www.HawaiiQSOParty.org](http://www.HawaiiQSOParty.org). If there are any additional log corrections please let us know before we publish the award certificates in about 3 weeks."

The Ko'olau Amateur Radio Club turned in a great performance from the KH6YY Superstation on Oahu with just over a thousand contacts before they had to QRT Saturday. The Battleship Missouri club participated again this year giving club members and new visiting hams a chance to operate from the radio room of this historic naval vessel. (They operate weekly and always encourage visiting hams to drop by.)

The Honolulu Emergency Amateur Radio Club station (KH6CE) with Darrel KH6XL and Randy KH6IB operating turned in a strong performance; the only Hawaii station that worked WAS this year!

Alan NH7NJ with over 500 contacts gave stations the only source of the KAU multiplier.

We had higher activity from Maui this year represented by Tom NH6Y, Kent KH6CJJ and

Alan KH6TU.

The Big Island was a standout with many new participants. Stan AH6KO turned in an outstanding low power station score and Don KH6DD had an impressive high power result.

Around 70 unique Hawaii calls appeared in station logs, about the same as last year. The number of KH6 station logs was about the same as last year. Our thanks to all the stations that operated to make the event successful. The HQP team appreciates everyone who participated and submitted logs.

Here is a quick apples-to-apples comparison of bands and modes between 2015 and 2014. Digital and SSB QSOs were slightly down; CW up slightly. The total difference of about 3K QSOs can be explained by poor 15 meter band openings this year. The 20 meter band was about the same; 40 meters a little up.

Bottom line! Band conditions in the Pacific were not as good as last year! But you all knew that without the statistics. Mahalo!

Best 73 de Joe, AH0A  
Member Hawaii QSO Party group

## League again asks FCC to allocate 630 meters

The ARRL has again urged the FCC to go forward with a proposed new Amateur Radio allocation at 472-479 kHz (630 meters) and to establish service rules for Amateur Radio operation at 135.7-137.8 kHz (2200 meters).

The League reiterated its Aug. 31 arguments in favor of flexible FCC Part 97 regulations in its September 30 reply

comments to the FCC's April Report and Order, Order, and Notice of Proposed Rulemaking (R&O/NPRM) in ET Docket 15-99. That R&O/NPRM raised several questions regarding how Amateur Radio might coexist with PLC systems used to control the power grid.

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## HF privileges open to all hams on 10 meters

All Technician Class Licensees have 10-meter privileges, so try your hand on HF!

The Aloha Chapter of Ten-Ten International Net, Inc. meets on 28.490 MHz, with an alternate frequency of 28.487MHz, every Monday evening at 6:30 p.m. HST. If you don't hear me, don't just listen, call "CQ!"

Help keep 10 meters in amateur radio hands.  
Thanks and aloha.

—Irene, NH7PE

## Ten-Ten Fall Digital QSO Party Nov. 14-15

Ten-Ten International Net has the Ten-Ten Fall Digital QSO Party Nov. 14-15, from 2:01 p.m. HST Friday, Nov. 13., to 1:59 p.m. HST Sunday, Nov. 15, 48 hours of 10-meter digital fun!

You can enter QRP classification if output power does not exceed 5 watts for digital operations during the entire event. QSO Parties are open to ALL amateurs with operating privileges on the 10-meter band (Technician, General and Extra Class), however, logs will be accepted only from active members as of the date of the event. Other logs will be used as check logs.

The November W6OI/VE9TEN/DL0X Special Event will be held the weekend of Nov. 21-22. This special event operation is where volunteers operate the 10-10 official club stations seeking to work anyone, anywhere! Any mode of operation is permitted. Operators will be authorized to operate W6OI from most U.S. states, and VE9TEN from various Canada Provinces/Territories simultaneously. DL0X is operated by Henry, DL8YBM. The purpose is to have fun promoting 10-meter activity, making contacts with 10-10 members and, of

course, non-members. This is a great way to increase membership. If you wish to operate W6OI, contact Jerry, N9AC.

Remember: Daily nets are held every day except Sunday at 8 a.m. HST on both 28.800 and 28.380 MHz. Listen, and if you can hear us, please join in!

Aloha and 73,  
Irene, NH7PE

## ARRL & FCC --

*From previous page*

Targeting comments filed by the Utilities Telecom Council (UTC), the ARRL called on the Commission to ignore UTC's call not to allocate 630 meters to Amateur Radio. It asked the FCC to implement a notification procedure for amateur stations within 1 kilometer (0.62 miles) of a transmission line carrying PLC and where the PLC system is operating on frequencies within or which overlap the 2200 or 630 meter bands.

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"The comments of UTC, without the benefit of any technical component or argument, oppose the allocation of the 630 meter band to the Amateur Service, and suggest overly and unnecessarily conservative regulation of amateur operation in the 2200 meter band," the ARRL told the FCC. "Whatever protection criteria are ultimately deemed to be necessary with respect to the 2200 meter band, those criteria would be applicable and sufficient as well with respect to the 630 meter band," the ARRL said. "There is no technical justification offered by UTC for withholding the 630 meter allocation."

The ARRL also urged the FCC to reject what it called "UTC's inchoate proposal" to elevate the unlicensed status of PLCs operating between 9 and 490 kHz, purportedly to protect them from interference "caused by amateur operations," while not making any accommodations to address PLC interference to Amateur Radio operations.

"UTC cannot have it both ways: It cannot enjoy the benefits of unlicensed operation under Part 15 of the Commission's rules as a carrier-current, unintentional emitter and at the same time claim the protection afforded an allocated, licensed radio service," the ARRL argued.

While the UTC has offered to work with the FCC, the ARRL characterized the UTC's comments as "distinctly unhelpful" in terms of providing information regarding the prevalence and location of PLCs that need protection, the interference potential from Amateur Radio operation and notification requirements, and just how much protection the PLCs actually need. "They are not responsive at all to the plethora of questions asked by the Commission in the Notice," the ARRL continued, "and those points that UTC makes are unsubstantiated."

The League said it's willing to work with utilities in setting up a notification procedure to address the unlikely possibility that Amateur Radio operations in the two bands might interfere with critical PLC systems.

"In order to implement this, UTC should be called upon to provide to ARRL or to the general public, a list of transmission lines carrying PLC which make use of either of the two subject bands, thus to facilitate notification," the ARRL reply comments said.

The League concluded by calling on the FCC to allocate 630 meters to Amateur Radio, as proposed in the Notice, reject UTC's proposal to elevate the status of PLCs, and implement a notification procedure for amateur stations within 1 kilometer of a transmission line carrying PLC in or near the two bands, and to make the LF and MF allocation changes in Part 2 and the Part 97 service rule changes, "as proposed by ARRL and not otherwise."



# US Amateur Radio Bands

## US AMATEUR POWER LIMITS

FCC 97.313 An amateur station must use the minimum transmitter power necessary to carry out the desired communications. (b) No station may transmit with a transmitter power exceeding 1.5 kW PEP.

Effective Date  
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Published by:

**ARRL** The national association for  
AMATEUR RADIO®

[www.arrl.org](http://www.arrl.org)

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### KEY

#### Note:

CW operation is permitted throughout all amateur bands.

MCW is authorized above 50.1 MHz,

except for 144.0-144.1 and 219-220 MHz.

Test transmissions are authorized above

51 MHz, except for 219-220 MHz.

- █ = RTTY and data
- █ = phone and image
- █ = CW only
- █ = SSB phone
- █ = USB phone, CW, RTTY, and data
- █ = Fixed digital message forwarding systems only

- E = Amateur Extra
- A = Advanced
- G = General
- T = Technician
- N = Novice

See [ARRLWeb](http://ARRLWeb) at [www.arrl.org](http://www.arrl.org) for detailed band plans.

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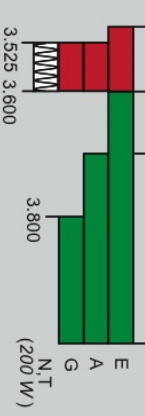
Exams: 860-594-0300 email: [vec@arrl.org](mailto:vec@arrl.org)

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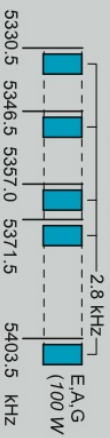
**160 Meters (1.8 MHz)**  
Avoid interference to radiolocation operations from 1,900 to 2,000 MHz



**80 Meters (3.5 MHz)**

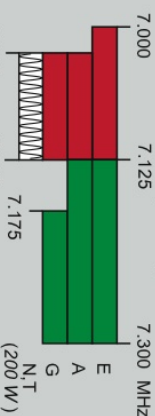


**60 Meters (5.3 MHz)**



General, Advanced, and Amateur Extra licensees may operate on these five channels on a secondary basis with a maximum effective radiated output of 100 W PEP. Permitted operating modes include upper sideband voice (USB), CW, RTTY, PSK31 and other digital modes such as PACTOR III as defined by the FCC Report and Order of November 18, 2011. USB is limited to 2.8 kHz centered on 5332, 5348, 5358.5, 5373 and 5405 kHz. CW and digital emissions must be centered 1.5 kHz above the channel frequencies indicated above. Only one signal at a time is permitted on any channel.

**40 Meters (7 MHz)**



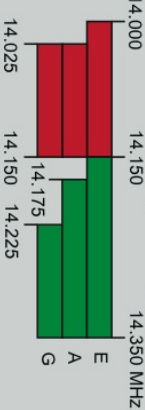
Phone and image modes are permitted between 7,075 and 7,100 MHz for FCC licensed stations in ITU Regions 1 and 3 and by FCC licensed stations in ITU Region 2 West of 130 degrees West longitude or South of 20 degrees North latitude. See Sections 97.305(c) and 97.307(f)(11).

Novice and Technician licensees outside ITU Region 2 may use CW only between 7,025 and 7,075 MHz and between 7,100 and 7,125 MHz. 7,200 to 7,300 MHz is not available outside ITU Region 2. See Section 97.301(e). These exemptions do not apply to stations in the continental US.

**30 Meters (10.1 MHz)**  
Avoid interference to fixed services outside the US.  
**200 Watts PEP**



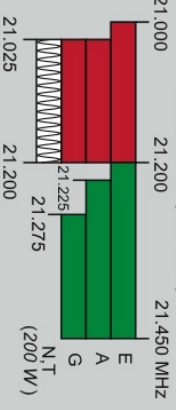
**20 Meters (14 MHz)**



**17 Meters (18 MHz)**



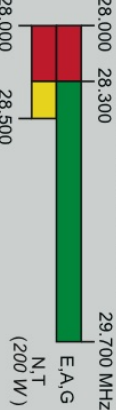
**15 Meters (21 MHz)**



**12 Meters (24 MHz)**



**10 Meters (28 MHz)**



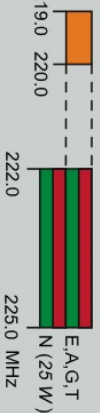
**6 Meters (50 MHz)**



**2 Meters (144 MHz)**



**1.25 Meters (222 MHz)**



\*Geographical and power restrictions may apply to all bands above 420 MHz. See *The ARRL Operating Manual* for information about your area.

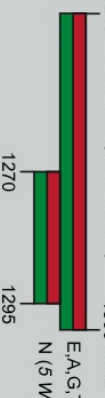
**70 cm (420 MHz)\***



**33 cm (902 MHz)\***



**23 cm (1240 MHz)\***



All licensees except Novices are authorized all modes on the following frequencies:

- 2300-2310 MHz 10.0-10.5 GHz \*
- 2390-2450 MHz 24.0-24.25 GHz
- 3300-3500 MHz 47.0-47.2 GHz
- 5650-5925 MHz 76.0-81.0 GHz
- 122.25-123.0 GHz
- 134-141 GHz
- 241-250 GHz
- All above 275 GHz

\* No pulse emissions